
The occurrence and management of fluid retention associated with TKI therapy in CML, with a focus on dasatinib.

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Authors: David Masiello, Gerry 3rd Gorospe, Allen S Yang

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Public Summary:

Clinical experience has shown that pleural effusions are generally reversible following a combination of dose interruption/reduction and additional supportive measures. In some rare cases more invasive steps like thoracentesis or chest tubes are necessary to resolve the condition. In order to ensure appropriate management, patients should be vigilantly monitored for pleural effusions. Additionally, patients should be educated to recognize relevant symptoms of pleural effusions and other drug-related side effects and encouraged to report such symptoms to their physicians.

Scientific Abstract:

Tyrosine kinase inhibitors (TKIs) like dasatinib and nilotinib are indicated as second-line treatment for chronic myeloid leukemia resistant or intolerant to the current first-line TKI imatinib. These agents are well tolerated, but potent and as such should be monitored for potentially serious side-effects like fluid retention and pleural effusions. Here we present key clinical trial data and safety considerations for all FDA approved TKIs in context for effective management of fluid retention and pleural effusions. Altering the dasatinib regimen from 70 mg twice daily to 100 mg daily reduces the risk of pleural effusion for patients taking dasatinib. Should pleural effusion develop, dasatinib should be interrupted until the condition resolves. Patients with a history of pleural effusion risk factors should be monitored closely while taking dasatinib. Patients receiving imatinib and nilotinib are not without risk of fluid retention. All patients should also be educated to recognize and report key symptoms of fluid retention or pleural effusion. Pleural effusions are generally managed by dose interruption/reduction and other supportive measures in patients with chronic myeloid leukemia receiving dasatinib therapy.

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